United Nations Environment Programme

Distr.
GENERAL

UNEP/GCSS.III/4
5 November 1991

ORIGINAL: ENGLISH

GOVERNING COUNCIL
Third special session
Nairobi, 3-5 February 1992
Item 6 of the provisional agenda

CONSIDERATION OF THE SECRETARY-GENERAL'S CONSOLIDATED REPORT ON FURTHER SUBSTANTIVE FOLLOW-UP TO GENERAL ASSEMBLY RESOLUTIONS 42/186 AND 42/187

Implementation of General Assembly Resolution 44/227 Consolidated Report of the Secretary-General

Note by the Executive Director

1. The General Assembly at its forty-fourth session, having considered the report of the Secretary-General on action taken by Governments and the organs, organizations and programmes of the United Nations system in connection with sustainable and environmentally sound development (A/44/350-E/1989/99), adopted resolution 44/227 of 22 December 1989. In that resolution the General Assembly expressed its views and recommendations for facilitating and promoting the implementation of its resolutions 42/186 on the Environmental Perspective to the Year 2000 and Beyond and 42/187 on the report of the World Commission on Environment and Development.

2. The General Assembly requested the Secretary-General to prepare a progress report on the implementation of its resolution 44/227 for submission to the Assembly at its forty-sixth session, through UNEP's Governing Council and the Economic and Social Council, and to the Preparatory Committee of the United Nations Conference on Environment and Development (UNCED). The Governing Council at its sixteenth session noted with appreciation the progress report of the Secretary-General (UNEP/GC.16/14) and, through the second regular session of the Economic and Social Council of 1991 (E/1991/52), transmitted it to the General Assembly at its forty-sixth session (A/46/138). The report was also transmitted to the third session of the UNCED Preparatory Committee.

3. The attached report is submitted in response to the General Assembly's request to the Secretary-General, also contained in its resolution 44/227, to prepare for submission to UNCED and to the General Assembly at its forty-seventh session, through the Governing Council of UNEP and the Economic and Social Council, a new consolidated report on further substantive follow-up to resolutions 42/186 and 42/187 by Governments and the organizations of the United Nations system.

IMPLEMENTATION OF GENERAL ASSEMBLY RESOLUTION 44/227

Consolidated Report of the Secretary-General

CONTENTS

		Paragraphs	*Pages*
I.	INTRODUCTION	1-4	1
II.	ACTION AT NATIONAL LEVEL	5-40	2
	A. Policies, strategies and plans	6-12	2
	B. Institutions and legislation	13-21	4
	C. Planning and management tools	22-34	7
	D. Participation of the private sector communities and NGO's	35-37	10
	E. Information and awareness-building	38-40	11
III.	ACTION BY THE UNITED NATIONS SYSTEM	41-72	13
	A. Changes in programme budgets	41-46	13
	B. Policies and programmes	47-70	14
	C. Coordination	71-72	22
IV.	INTERNATIONAL COOPERATION ON GLOBAL ENVIRONMENTAL ISSUES	73-81	23
	A. Progress of action	73-80	23
	B. Mobilization of new and additional finance	81	25
V.	OUTLOOK ON SUSTAINABLE WORLD DEVELOPMENT	82-99	26
VI.	CONCLUSION	100-101	31

I. INTRODUCTION

1. At its forty-fourth session the General Assembly considered the report of the Secretary-General (A/44/350) containing information on actions taken by Governments and the organs, organizations and programmes of the United Nations system for sustainable and environmentally sound development and on 22 December 1989 adopted resolution 44/227 in which it set forth views and recommendations to promote further implementation of its resolutions 42/186 and 42/187, respectively, on the Environmental Perspective to the Year 2000 and Beyond, and on the report of the World Commission on Environment and Development. The General Assembly expressed concern that much more needed to be done in translating the increased understanding of the need for sustainable and environmentally sound development into concrete action in all countries and invited Governments and the governing bodies of the organizations and programmes of the United Nations system, as well as other intergovernmental and non-governmental organizations, to intensify efforts towards promoting and achieving sustainable and environmentally sound development, among other things, by integrating environmental concerns and considerations into policies and programmes in all areas.

2. In its resolution 44/227, the General Assembly requested the Secretary-General to prepare a progress report on implementation of the resolution for submission to the Preparatory Committee for the United Nations Conference on Environment and Development (UNCED) and to the General Assembly at its forty-sixth session, through the Governing Council of the United Nations Environment Programme and the Economic and Social Council. UNEP's Governing Council, at its sixteenth session, noted with appreciation the Secretary-General's progress report (UNEP/GC.16/14), transmitted it to the UNCED Preparatory Committee at its third session, and to the General Assembly at its forty-sixth session (A/46/138), through the second regular session of the Economic and Social Council of 1991 (E/1991/52). The present report is submitted in response to the General Assembly's request in its resolution 44/227 to prepare, for submission to UNCED and to the General Assembly at its forty-seventh session, through the Governing Council of UNEP, a new consolidated report on substantive follow-up to the resolutions 42/186 and 42/187 by Governments and the organizations of the United Nations system.

3. In preparing the present report, UNEP's Executive Director, on behalf of the Secretary-General, brought General Assembly resolutions 44/227, 42/186 and 42/187 to the attention of Governments and of the organs, organizations and programmes of the United Nations system by letters of 11 May 1990, 17 August 1990 and 24 May 1991, and requested information on the progress of implementation. In all, 38 countries and 29 United Nations organizations and bodies responded, and the present report is based largely on those responses. The responding countries were: Afghanistan, Australia, Belgium, Benin, Bhutan, Bolivia, Burkina Faso, Canada, China, Congo, Costa Rica, Cyprus, Ecuador, Egypt, El Salvador, Finland, France, Holy See, Honduras, Indonesia, Jordan, Libyan Arab Jamahiriya, Madagascar, Malaysia, Mauritius, Netherlands, Nigeria, Norway, Oman, Pakistan, Panama, Philippines, Romania, Singapore, Switzerland, Thailand, Trinidad and Tobago and the United Kingdom. The responding United Nations organizations and bodies were: Food and Agriculture Organization of the United Nations (FAO), International Atomic Energy Agency (IAEA), International Civil Aviation Organization (ICAO), International Fund for Agricultural Development (IFAD), International Labour Organisation (ILO), International Maritime Organization (IMO), United Nations Educational, Scientific and Cultural Organization (Unesco), World Meteorological Organization (WMO), Economic Commission for Latin America and the Caribbean (ECLAC), Economic and Social Commission for Asia and the Pacific (ESCAP), United Nations Centre for Human Settlements – Habitat (UNCHS), United Nations Development Programme (UNDP), the office of the United Nations Disaster Relief Coordinator (UNDRO), United Nations Children's Fund (UNICEF), United Nations Industrial Development

Organization (UNIDO), World Food Programme (WFP), United Nations Department of Technical Cooperation for Development (DTCD), United Nations Department of International Economic and Social Affairs, (DIESA), Office of the Director-General, Development and International Economic Cooperation (ODG/DIEC), International Oceanographic Commission (IOC) and the General Agreement on Tariffs and Trade (GATT).

4. The present report is intended to provide a representative idea of the substantive progress made and to outline issues that merit attention in further follow up to the General Assembly resolutions. It reviews and analyses the means of implementation and the prospects for further success, drawing, *inter alia*, upon the materials on which the Secretary-General's Progress Report (A/46/138) was based and on materials subsequently received. Several other reports before the General Assembly, notably those from UNEP's Governing Council and from the Preparatory Committee of UNCED, also contain significant information on action for environmentally sound and sustainable development. The present report should be read in conjunction with those reports.

II. ACTION AT NATIONAL LEVEL

5. General Assembly resolutions 42/186 and 42/187 stressed the integration of environmental concerns into development policies, programmes and budgets: environmental and development goals needed to be approached in mutual support and close coordination. A preventive approach to environmental problems was considered cost-effective and environmental management was to be implemented, keeping in view the alleviation of poverty, structural change and the broad-based participation of people in development. Policies, measures, procedures, methods, institutions, research and development, information, education and monitoring had to be introduced to put into effect such an integrated approach. International cooperation was considered critical in dealing with environmental challenges and countries had to reconcile global with national and local needs, and short-term goals with long-term ones. The involvement of concerned interest groups in environmental management was critical. The resolution of conflicts of interest was considered to be at the heart of finding satisfactory solutions to environmental problems. Countries' capacities in environmental assessment, monitoring, research, legislation, policy and planning, education, training, information, and institutions had to be strengthened. New and additional finance, the transfer of environmentally sound technology and technical cooperation were called for. It was considered that deteriorating external terms of trade, restricted access to export markets, reversed financial flows, meagre foreign investments, high external debt, and difficult access to technology for the developing countries had to give way to international economic conditions more congenial to sustainable development.

A. Policies, strategies and plans

6. Many Governments have found it practical to prepare a white paper or a formal policy statement on the environment and sustainable development. In some countries this has taken the form of a presidential decree, in some others, a declaration on objectives and strategies, and in still others, an action plan or programme. Bolivia's presidential decree on conservation of natural resources and the protection of the environment has been made the basis of a five-year plan for forestry development and environmental protection. Ecuador and Honduras have similarly set out their policy objectives and strategy of implementation. Colombia's national environmental policy created a new Ministry of Environment with a budget of over 972 million U.S. dollars over four years, providing economic incentives and disincentives for environmental management. Some countries (e.g. Congo, Lesotho, Madagascar, Mauritius,

Nigeria, Seychelles) have held national-level conferences or workshops and roundtables to build consensus on policy and to mobilize funds to implement environmental action plans. Many have developed or are elaborating national conservation strategies (e.g. Nepal, Pakistan). *The raison d'être* of national environmental action plans, policies and strategies is increasingly provided by the concept of sustainable development. The bearing of environmental change on economic and social well-being is being increasingly recognized, at least qualitatively, and environmental action and investment is advocated not merely on grounds of improved quality of life, but of increased productivity, incomes, health and employment.

7. New national environmental policies reflect the trans-sectoral character of environmental issues and the need for better environmental coordination. But the degree to which they elaborate on the implications of the environmental policy for sectoral development or for previously declared sectoral policies varies greatly. In Burkina Faso environmental policy provides for the protection of forests, firewood management, the improvement of living conditions and institutional support. In Bhutan and Jordan the policy declares that population and environmental issues are to be seen as integral parts of development planning. In China policy calls for a coordinated approach to the environment, economy and society, and for the incorporation of environmental protection into sectoral policies to readjust the industrial structure and its spatial distribution. In Colombia public finance and economic policy aspects of environmental management receive emphasis. In Egypt the National Five-Year Plan encompasses environmental protection and improvement. Benin has chosen a similar approach and in Cyprus the environment is made part of the social policy of the Development Plan for 1989-1993. Panama's Modernization and Development Plan is expected to provide for programmes for environmental management. France's National Plan for the Environment or Green Plan seeks to integrate environmental concerns into economic and sectoral policies, especially those for agriculture, industry, transport and energy. In Trinidad and Tobago a national policy on the environment as well as a National Conservation Strategy are being prepared. Malaysia's national development plan contains a chapter on environment and it has developed an Environmental Perspective to the Year 2000 to link development objectives and environmental prospects. Malaysia's annual state-of-the-environment report monitors the implementation of environmental policies and the impacts of economic development.

8. Indonesia has prepared a natural-resources-use plan and Madagascar has enunciated a strategy with emphasis on people's participation, physical planning, institutional development and regulations. The Philippines' strategy for sustainable development stipulates integration of environmental considerations into decision-making, resource pricing and property rights, and includes among its objectives the conservation of biodiversity, rehabilitation of degraded land, residues management, control of population growth as well as human resources development. Thailand's Seventh National Economic and Social Development Plan distinguishes natural resource development from environmental development, including pollution control. Singapore's environmental policy places emphasis on the specification of environmental quality standards in relation to economic development targets and on laying down responsibilities and procedures for their implementation.

9. In Canada the Federal Government, having endorsed the concept of sustainable development, promotes it through consultation and research which have led to the Green Plan. The Netherlands has prepared the National Environmental Policy Plan-Plus, following the first Policy Plan for 1990-1994. It elaborates specific actions that are necessary to achieve the Plan's targets rapidly and addresses sustainable conservation, restoration and development of nature and landscape values, and provides inputs into various public policies. It aims at creating closed cycles for materials, saving energy, improving product quality and production processes, and preventing the transfer of environmental costs and responsibility from one sector to another. Environmental policy receives top priority, on a par with fiscal policy and

monetary policy, and the Government is committed to considering the environmental implications of all public policies.

10. Norway's policy highlights the relationship between national action and international cooperation to address global problems, e.g. climate change, depletion of the ozone layer, transboundary air pollution, the protection of the oceans. It also reflects the response of development aid policy to the environmental management needs of the developing countries. The Netherlands and the United Kingdom have special policy frameworks for their development assistance programmes to promote environmental management. The United Kingdom's White Paper on the environment emphasizes the integration of the environment into all sectors and the protection of the environment in the European context, including support for integrated agricultural and environmental policies of the European Community. The United Kingdom's national policy encourages efficient use of energy and natural resources to meet the country's commitment to help solve global environmental problems. Australia's national policy on ecologically sustainable development is based on five basic principles: integrating economic and environmental goals within policies and activities; ensuring that environmental assets are appropriately valued; providing for equity within and between generations; dealing cautiously with risk and irreversibility; and recognizing the global dimension. It also recognizes the need for flexibility and alignment with the progress of actions in the rest of the world, keeping in view the realities of international competitiveness, technological innovation, consensus-building among sectors and groups and coordination among different levels of government.

11. Global agreements, negotiations and guidelines concerning the ozone layer, climate change, biological diversity, hazardous wastes, marine pollution, toxic chemicals, land, water and forest management, etc., are progressively finding expression in national environmental planning and policy statements.

12. The process of formulating national environmental policy increasingly reflects the participation of concerned groups, and policy is coming to be seen as a vehicle for building national consensus on the priorities and strategies of sustainable development. The implications of policy for the content of economic and social development, including the participation of the different sectors, income groups, and the pattern of trade, transnational investments, technology transfer etc., are often not spelt out. Moreover, the means of achieving the declared policy objectives are not always elaborated. Responsibilities for implementation, time-limited and sector-specific targets, the allocation of finance to put into effect various intended measures, the mechanisms for monitoring and feedback, and the means of enforcing accountability for implementation are often unclear.

B. Institutions and legislation

13. Several countries have established, strengthened or reorganized institutions for environmental action and coordination, and have related them to development action. Many countries have strengthened environmental laws, regulations and standards. In The Netherlands a special advisory body reviews the operational implications of the national policy on sustainable development and suggests implementing measures under the National Environmental Policy Plan. The Netherlands Council for Physical Planning and the Environment, the National Environment Commission, National Commission on Town and Country Planning and the Coordinating Commission on International Environmental Issues play significant roles in the design and implementation of sustainable development programmes. Finland's Commission on Environment and Development will formulate proposals for policy and institutional arrangements. Similarly intended arrangements are being made in Afghanistan. An agency on Environment and Energy has been established in France, backstopped by the

National Institute on Industrial Environment and Risks and the French Institute on the Environment for Data Collection and Dissemination. In the United Kingdom all important environment-cum-development issues are submitted for Cabinet decision. In Malaysia a National Steering Committee on Environment and Development has been established. In Costa Rica an Inter-Ministerial Commission for Environmental Matters has been set up. In Australia the Environment Minister is a member of the Structural Adjustment Committee of the Cabinet and environmental impacts are addressed in Cabinet submissions. A special subcommittee on sustainable development has been established.

14. In Mauritius the National Environment Commission chaired by the Prime Minister is the final arbiter on policy, and the Environment Council of Mauritius and the National Fund for the Environment play vital roles in awareness-building and mobilization of finance. In Nigeria the Federal Environment Protection Agency initiates environmental research, specifies standards, supervises and enforces compliance, and disseminates environmental guidelines and criteria, while the Natural Resource Conservation Council is responsible for formulation of policy and coordination on conservation. Singapore's Environment Policy Management Division oversees strategic planning and research, international environmental cooperation and pollution control. Congo intends to reorganize the General Directorate of the Environment into a National Environment Agency.

15. The Council for the Conservation of Natural Resources and the Protection of the Environment is the lead coordinating body on environmental matters in Oman, with executive functions vested increasingly in the Ministry of the Environment. The National Environment Committees in Bhutan and in Benin service the National Planning Commission and are responsible for developing their countries' strategies for sustainable development. Thailand's National Environment Board prepares action plans and programmes within the framework of the National Economic and Social Development Plan. In China the Environment Protection Commission of the State Council advises on, coordinates and promotes environmental consideration in all departments and sectors. In Egypt the Environment Affairs Agency has been strengthened, with branch offices in all regions; an Environmental Research Council has been created in the Academy of Sciences. An Institute for Marine Affairs has been established in Trinidad and Tobago.

16. Many national environmental commissions or councils (e.g. in Canada, Finland, Mauritius, Netherlands, Nigeria, Singapore) provide for the participation of industry, the private sector and NGOs, in addition to that of the scientific community. Increasingly, a consultative and consensus-building approach to environmental regulation is being favoured. While the work of the national councils or commissions in some countries is backstopped by scientific analysis and data, in many countries the advisory and overview functions of such bodies are handicapped by inadequate access to relevant scientific data and to analyses of environmental conditions and the implications of changes therein. Inadequate technical information and analytical capabilities to spell out the social, economic, sectoral and geographic implications of alternative courses of environmental action are a major constraint in designing socially satisfactory programmes of sustainable development.

17. The incorporation of environmental concerns into the policies and programmes of development sectors is the aim behind the designation of environmental focal points in sectoral ministries in several countries. In Belgium these focal points, supported by a standing federal-regional coordination committee, are intended to integrate development and environmental protection consideration. Pakistan envisages the creation of environmental cells in federal and provincial planning and development departments. A Sustainable Development Unit has been established in the Ministry of Budget and Planning in Nigeria, where such an arrangement is also envisaged at provincial levels. In China, government

departments have consolidated their capacities for environmental protection. Special environmental units have been created in some government departments in the United Kingdom. Nowhere are such units seen as reducing the significance or the authority of the central environment department; they are intended to strengthen environmental assessment, planning, management and monitoring in relation to development in individual sectors, e.g. industry, transport, energy, tourism, agriculture. Coordination for sustainable development is being attempted by means of internalizing environmental responsibility in sectoral decision-making in development administrations at various levels.

18. Concerted federal and regional policies to link environment and development have received prominence in Canada. Round tables have been established in provinces and territories to bring existing institutions together to achieve integration of the environment and the economy, to serve as a catalyst for change to build consensus on sustainable development, to define a strategy, and to provide an independent forum for cooperation among sectors and interest groups. The membership of the national round table on environment and the economy includes senior federal and provincial cabinet ministers, corporate executives and distinguished people from academia, research and non-governmental institutions. The round table evaluates policies and decision-making processes and considers planning and management tools which are intended to be reviewed by a national conference on sustainable development.

19. Many countries have strengthened environmental legislation relating to areas of priority concern to them and some have introduced new legislation, for example: governing maintenance of the ecological balance and living conditions for sustainable development (Burkina Faso); governing pesticide imports (Jordan); for the protection of the marine environment and the prevention of air pollution (Egypt); and for the control of toxic chemicals (Belgium). Several countries have introduced legislation for prior environmental impact assessment of new development projects in specified sectors and to introduce required procedures and mechanisms. Some have enacted measures in relation to existing or anticipated international agreements, e.g. depletion of the ozone layer, transboundary movement of hazardous substances, energy saving and greenhouse gas emissions.

20. Several countries are developing umbrella environmental legislation, since laws having a bearing on environmental management tend to be scattered over different ministries and unrelated. Although the environment is affected by laws for industry, agriculture, energy, land use, transport, etc., these laws are rarely analysed and their implementation is rarely monitored from the standpoint of environmental management. Difficulties in enforcing environmental legislation, especially in the developing countries, have been pronounced and common. The constraints include inadequacies in technical expertise, institutional capacities and equipment to monitor and enforce accountability for compliance. The determination of standards and norms adapted to the circumstances and needs of countries has also been difficult. Costs of implementing the legislation are often not provided for at adequate levels, nor are the responsibilities for implementation clearly defined.

21. While laws responding to specific environmental problems (e.g. air pollution, water pollution, deforestation, toxic chemicals and hazardous wastes) are being enacted and strengthened in most countries, legislative frameworks to provide explicit support for reconciling environmental conservation and economic development concerns are rare. Australia's Resource Assessment Commission Act is based on three policy principles: (a) taking an integrated approach to environmental, ecological and development decisions; (b) optimizing net benefits to the community from the nation's resources, with regard for economic efficiency, environmental management, ecological integrity, sustainability of development, and equitable distribution of the returns on resources; and (c) flexibility in resource use, recognizing that in some cases environmental and development interests can be accommodated either concurrently or sequentially, and in other cases trade-offs must be made.

C. Planning and management tools

22. So far, regulation has been the main instrument of environmental planning and management, involving specification of responsibilities to redress environmental damage, and restrictions on actions e.g. on emission of pollutants, use of substances, disposal of wastes and location of factories. Gradually, however, environmental regulation and standards are being supplemented by economic policy instruments which work through the market mechanism. The instruments of pricing, charges, fees, royalties, tradable permits, taxes, subsidies, deposits, performance bonds, etc., are intended to influence enterprise and household decisions in favour of environmentally sound production and consumption, while simultaneously allocating resources more efficiently and furthering economic development.

23. Economic policies can create markets where none existed before, e.g. for clean air, water, open spaces, recreational areas, pollution entitlements involving, e.g. SO_x, CO_2, NO, CFC's. They can also make the markets more efficient, taking account of resource scarcity and the assimilative capacity of the environment. Such policies are helping to raise the relative returns on environmentally-friendly products, processes and technologies. Governments, industry, enterprises and people need flexibility in adjusting their production structures, economic activities and lifestyles to meet environmental goals, even as they pursue their own social, economic and other goals. Market-based measures help to introduce such flexibility. They can also help reduce the total costs of meeting environmental objectives, since technological and other capacities for environmental management differ among enterprises and among households. Market-based measures have encouraged innovation to lower the costs of meeting environmental standards and to reach higher environmental standards, and can help in improving equity in the distribution of environmental management costs. Widespread disillusionment with central economic planning coupled with an emphasis on the full mobilization of the private sector as the main engine of economic growth have led to research and deliberation in many countries on how best to use economic policy instruments for environmental management. However, actual applications and an analysis of their effectiveness have so far been limited.

24. The National Environmental Policy Plan-Plus of The Netherlands sets out principles for the further development of instruments that would link environmental issues with the economy. The Plan, recognizing that regulations are the foundation for the use of instruments, gives special attention to financial incentives. Such instruments are required to satisfy the criteria of equality before the law, legal certainty, democratic control, effectiveness and efficiency; moreover, they must be compatible with the laws of the European Community. They include agreements, including voluntary agreements, regulation, financial incentives, information and penalties. They encompass charges for dumping and incineration, use of secondary materials, cash deposit systems for packaging, a regulatory energy levy, regulatory raw material levies, cash deposit systems for reusable substances, and a regulatory levy on pollutants from agriculture.

25. In France the choice of environmentally sound technology is encouraged through application of the "polluter pays" principle and financial incentives; special taxes are envisaged on waste materials to promote recycling and on air pollution. Jordan has introduced economic incentives for industry to improve its involvement in environmental management. In its White Paper on the environment, Mauritius envisages the use of taxes, charges and other incentives. In Singapore unleaded petrol is cheaper than leaded petrol to promote the use of the former. In many countries, deposit-refund schemes to encourage reuse of containers or materials are common and so are non-compliance fees imposed on enterprises for not meeting required environmental norms. Many countries (e.g. Australia, Canada, Finland, Sweden, United Kingdom) are examining the scope for broadening the application of economic policy

instruments to achieve environmental goals. In the process, they are also taking account of how changes in the prices of inputs and products as a result of application of such instruments might affect competitiveness. The Organisation for Economic Cooperation and Development (OECD) has prepared guidelines for member countries for the application of economic policy instruments for environmental purposes.

26. Many developing countries are examining the use of pricing as a tool for water conservation, forest conservation, guiding land use and controlling land degradation. The World Bank and the Asian Development Bank have helped to carry out sector-specific and country-specific studies to ascertain the possible use of economic policy instruments for environmental management. Government subsidies that encouraged misuse of land resources and excessive harvesting of forests, or excessive use of chemicals in agriculture have come under close scrutiny and in several instances have been discontinued or reduced (e.g. Brazil, Costa Rica, Indonesia). Efforts are under way to relate the economic efficiency goals of structural adjustment to better environmental management in several countries. Governments are also exploring environmental charges, fees and prices as a supplementary source of public finance for environmental management (e.g. Colombia). Eastern and central European countries which previously had a rigid, central-planning approach to environmental management are searching for the right economic tools to harness the market mechanism to implement environmental policies. UNEP's programme for the exchange of experience on methodologies and procedures for planning the environmentally sound development of these countries gives increasing attention to the use of economic and fiscal policy instruments.

27. Environmental impact assessment has been the pre-eminent tool of environmental decision-making at the project level. Most developed and many developing countries have legislated procedures for environmental impact assessments and the responsibilities of enterprises, government departments, communities, etc. in that regard. Widespread and growing use of such assessments has helped introduce environmental sensitivity in decision-making at the enterprise level. Yet the effectiveness of such assessments has been constrained by several factors, among them: (a) their insufficient integration into socio-economic appraisal of projects, mainly on account of valuation problems; (b) insufficient baseline environmental data; (c) lack of provision for cumulative or synergistic assessment of impacts from a number of sources within a given geographic area; (d) lack of provision for assessing environmental impacts of sectoral policies influencing the behaviour of a large number of decision makers, as distinguished from discrete projects; (e) lack of integration of risk assessment and, correspondingly, lack of provision of contingency planning for the same; and (f) lack of monitoring equipment, facilities, expertise and institutional capacity for implementation. The issue of designing and implementing technically adequate cost-effective and efficient environmental impact assessment methods and procedures, with the involvement of concerned interest groups to achieve consensus on feasible and optimal choices is commanding the attention of experts and policy makers alike. In several countries, training of personnel in implementing the required environmental impact assessment procedures has begun to receive priority attention.

28. To bridge the gap between principles, policy or action plans for sustainable development and their implementation, indicative targets which are time-limited, sector-specific and area-specific are defined and primary responsibility for their attainment is designated. Supportive policies, incentives, procedures, monitoring, control and feedback mechanisms are devised, involving the concerned parties and groups, and finances to implement the required measures are provided for. The British environmental strategy, for example, specifies environmental quality targets for water, hazardous substances, solid waste, recycling of materials, nuclear power, radioactive waste, noise, etc.; outlines sectoral actions required to achieve the set goals; defines the responsibility of agencies and the concerned parties for action; and

indicates the outlays necessary to implement the actions, including those that should come from the private sector. Norway's environmental policy aims, *inter alia*, at reducing sulphur dioxide emissions by 50 per cent by 1993, using 1980 as the base year, by means of: laws; policy guidelines to reduce the need for use of cars and parking spaces; transport plans for the ten largest urban areas; increase in petrol tax; limiting the sulphur content of fuel oil to 0.2 per cent; introducing low-sulphur heavy fuel oil and stringent requirements for industry in the areas subject to acidification. Similarly, Norway plans to work towards stabilizing CO_2 emissions in the year 2000 at levels reached in 1989.

29. In The Netherlands the Government's declared goal of achieving production and consumption patterns to conform to the requirements of sustainable development within one generation is factored into other policies as well, notably: water management; physical planning; nature conservation; energy saving; traffic and transport; agriculture and development cooperation. The country's Project KWS 2000, aimed at reducing photochemical air pollution and atmospheric concentrations of ozone, provides an interesting case study in implementing a coordinated approach to environmental planning and management. Australia has set up working groups for the sectors of agriculture, forestry, fishing, mining, energy production and distribution, energy use, manufacturing, transport and tourism to make concrete proposals for the implementation of the country's policy of ecologically sustainable development. Singapore's Pollution Control Department in the Ministry of the Environment applies the instruments of land use planning, provision of environmental infrastructure, including provision of waste disposal and processing facilities, environmental impact assessment of new development initiatives, environmental monitoring and reporting, and enforcement of accountability to meet environmental standards through legislation, economic incentives and disincentives, and the clear specification of time-limited and area-specific environmental quality targets.

30. To link the environment and the economy better in planning and in implementing plans, it is necessary that the socio-economic significance of major environmental changes as well as environmental policies be made explicit, wherever possible in measurable terms, as expressed by indicators of human well-being. This is not yet being systematically done, although a number of countries (e.g. Australia, Canada, France, Norway, The Netherlands) are addressing this issue in relation to specific environmental challenges. The issue of valuation of environmental resources and services needs to be tackled in practical terms if the weight of environmental values is to register in decisions involving inter-generational equity; or the efficiency of allocation of resources; or affordable access of different population groups to scarce ecological amenities and services; or equity in the international sharing of the costs of global environmental management.

31. Norway's Central Bureau of Statistics issues regular environmental and natural resource briefings: environmental accounts expressed in concrete terms are prepared and attempts are made to integrate them with policy analysis within the energy sector. Some other countries are examining the usefulness and feasibility of preparing satellite accounts for selected resources to supplement periodic reporting on their economy's well-being. Some economists have proposed revising the standard framework of national income accounts to reflect depreciation of natural capital stocks (e.g. forests) in terms of reductions in national income, so that economic growth might be measured in terms of changes in sustainable income levels, and the impact of environmental change on national output will be accounted for. Methodological difficulties have so far prevented general application of the principle.

32. Geographical information systems are gradually making available area-specific data on natural resources and the environment. Such data, however, are not yet available in a form that can be related to indicators of economic well-being such as employment, incomes, output,

productivity, exports, imports, nutrition, sanitation and public health and drinking water supply. There is an urgent need to assess and relate environmental indicators to socio-economic indicators of well-being, even if the former are only approximate, at such levels of disaggregation as would facilitate practical planning for sustainable development, especially in ecologically stressed areas. Agricultural development and land use planning in sub-Saharan Africa, for example, should benefit from such practical dovetailing of geographical information systems with socio-economic data systems.

33. Many countries regularly monitor and report on the state of their environment. Some of these reports are prepared by Governments, some by scientific research institutions, some by non-governmental organizations. Increasingly, these reports reflect a sensitivity to the interrelationships between the environment, economy and society. Canada's state-of-the-environment report is being further improved to inform economic decision makers better and also to make them more accountable for the environmental effects of their policies and programmes. Finland, Norway and the United Kingdom emphasize better coordination between the agencies monitoring various aspects of the environment at various levels of administration. Norway encourages corporations to introduce environmental audits of their activities. In The Netherlands annual evaluations of the implementation of environmental policy and related sectoral policies help adjust environmental plans. Some developing countries have strengthened their environmental monitoring capacity for pollution control (e.g. Cyprus, Jordan, Pakistan). In Singapore regular monitoring of air and inland and coastal water quality assesses the adequacy of control programmes and helps make orderly progress towards specified targets for a clean and healthy environment. In preparation for UNCED, many countries have prepared national reports on environment and development and, in the process, fostered a better understanding of their environmental conditions and problems and the latter's relationship to development prospects. Periodic national environment or sustainable development reports can be a valuable tool for planning and management, apart from being a vehicle for raising awareness of and building consensus on issues and required actions.

34. In most developing countries, institutional capacities to mobilize and analyse relevant data for decisions on environment and development have to be increased significantly. But the gathering of environmental data should not become an end in itself. In some developed countries, environmental policy is increasingly being guided by economic analysis of alternative courses of action. Information for such analysis is provided by both environmental and economic data. For example, realistic and cost-effective targets for the control of emissions of volatile organic compounds are set in The Netherlands, based on a cross-section comparison of the costs of control at various levels. The optimal setting of environmental standards and policies, geared specifically to the needs and circumstances of an individual country, requires the availability of such indigenous analytical and information capability. In most countries, capacities for integrative analysis to guide policy and planning are either inadequate or wholly lacking.

D. Participation of the private sector, communities and NGO's

35. Satisfactory solutions to the challenge of reconciling environmental concerns with development needs are often found when the viewpoints of the interest groups concerned are taken into account to form optimum compromises. This realization is gradually influencing environmental policy formulation and design and implementation of projects, programmes, sectoral policy adjustments, monitoring and coordination. In a few countries, the mechanisms and procedures for involvement of the concerned communities, NGO's and the private sector are institutionalized. This is notably the case with regard to carrying out environmental impact

assessments of development initiatives in designated sectors. In most countries, however, the participation of the private sector, NGO's and community groups in environmental decision-making remains ad hoc, issue-oriented and informal. Yet over the last four years there has been a dramatic upsurge in the involvement of NGO's and community groups in environmental awareness-building. The process of preparing for UNCED has reinforced this momentum. Encouragement of NGO's and private sector involvement in environmental action is part of official policy in many countries (e.g. Australia, Canada, Cyprus, Egypt, El Salvador, Honduras, Mauritius, The Netherlands, Nigeria, Norway, Pakistan, Trinidad and Tobago, United Kingdom). Several countries provide special budgetary support for NGO involvement in helping to address specific environmental challenges e.g. environmental awareness-building, afforestation.

36. Major corporations in some developed countries are not only responding to the profit-making opportunities presented by growing consumer preference for "green" products, but are also recognizing that timely investment in environmental management could improve their competitive position in the long run, apart from gaining them goodwill and recognition. The Second World Industry Conference on Environmental Management (Rotterdam 1991), the Global Environmental Investment Conference (New York, 1991), and the formation of the Business Forum for Sustainable Development are symptomatic of the growing activism of business and industry in environmental management. Introduction of environmental policy and planning, including specification of norms and implementation of protection systems, research and development for environmentally sound technology; training of staff in environmental management; adjustment of production processes; changes in product mixes; environmental auditing; monitoring and reporting are some of the ways in which the business community is responding to the challenge of environmentally sound development.

37. In Canada the International Institute for Sustainable Development promotes the involvement of the private sector and NGO's in actions for sustainable development. Canada's Round Tables on the Environment and the Economy facilitate dialogue among the business community and interest groups and promotes the latter's involvement in policy development and implementation. The nine working groups that Australia has established for its main resource-using sectors to translate Australia's national policy on ecologically sustainable development into programmes of action are composed of representatives from government departments, labour unions, industry groups, community groups and environmental NGO's. In The Netherlands a number of companies and organizations have adopted environmental policies and plans and set up various forums on sustainable development. In many countries, the active involvement of the private sector and NGO's in environmental issues has heightened public awareness of the different facets of the environment and development challenge, and has forced debate and deliberation to make development decision-making as well as environmental policies more balanced and transparent.

E. Information and awareness-building

38. Environmental information and awareness-building have expanded considerably in most countries in the last four years. Governments, universities and research institutions, industry, business and NGO's have greatly enhanced the information flow on environmental issues with local, national, as well as regional and global significance. The active involvement of consumer groups, citizen groups and conservation groups has played a vital role in this process. The establishment of national environment councils, the holding of national conferences and workshops and the preparation of national reports on environment and

development have also generated a great deal of pertinent information and analysis. The work of newly created or strengthened environment agencies and the emphasis that several development aid organizations place on assessing environment and development conditions in recipient countries have contributed to this trend. The considerable flow of information from international organizations on global and regional environmental issues such as climate change, depletion of the ozone layer, energy saving, deforestation, desertification, water scarcity and pollution, hazardous wastes and toxic chemicals, and the process of intergovernmental consultations and negotiations on environmental issues have reinforced this trend. National and regional preparatory conferences for UNCED have also helped the trend along. Environmental education has become part of school education in many countries. National parliaments and state legislative assemblies are increasingly engaged in environmental policy issues and their linkage to development needs and goals.

39. Environmental newsletters and magazines have multiplied and become popular. In Egypt a monthly magazine on environment and development is published. China publishes a quarterly newsletter on the world environment, in Chinese and English, in addition to a monthly bulletin for overseas distribution. Newspapers in developed and developing countries alike regularly and prominently carry feature articles and news items focusing on environmental issues. The Inter-Press Service, a radio and print media network in the Latin America and the Caribbean region, disseminates news features and items on environment and development in English, Portuguese and Spanish. The Press Foundation of Asia, a network of journalists in Asia and the Pacific, performs a similar service in English. Television networks, especially in North America and Europe, have focused extensively on global environmental issues and a large number of documentaries have been produced on environment and development issues. The Television Trust for the Environment, a non-profit organization founded by UNEP and Central Television (United Kingdom) acts as a catalyst for new television and radio productions, with particular emphasis on building up programme-making capacities and providing programmes free of charge to television stations and NGO's in the developing countries. Artists, writers and entertainers have become increasingly involved in environment-related activities and have helped to broaden public awareness of and commitment to environmentally responsible lifestyles.

40. Environmental news networks have been established and strengthened at the global, regional and national levels. The Federal Environmental News network in Canada works with eight regional networks. In Egypt mass media information campaigns are conducted on air pollution, water conservation, sanitation and sustainable development. In Indonesia a people's participation programme supports the conservation of natural resources; Madagascar and Trinidad and Tobago have initiated programmes to build public awareness on conservation of resources. Afghanistan, Jordan and the Philippines have introduced or intensified programmes on environmental education and public participation in environmental improvement. In The Netherlands a target-group management procedure has been developed for discussion and awareness-building of environmental policies. In Thailand volunteer programmes and village-level groups are active in promoting environmental awareness and action. Many countries hold public campaigns and allocate significant budgetary resources to increase awareness and the involvement of people in environmental action. For example, Australia has established a network of institutions to plant a billion trees by the year 2000. Singapore carries out an annual campaign of "Clean and Green Week – Green for Life". Congo, Mauritius, Pakistan, and Thailand are similarly committed to promoting broad-based environmental awareness through public information education and mass media. El Salvador conducts environmental education campaigns in press, television and radio and is developing a master plan for environmental education. Environmental education at all levels is a top priority in France.

III. ACTION BY THE UNITED NATIONS SYSTEM

A. Changes in programme budgets

41. Heightened awareness of environmental changes and their linkage to economic development in the States Members has led to larger budgets for environment-related programmes and activities in the United Nations system. Organizations have adjusted priorities and diverted resources to respond to demands for assistance for sustainable development. The reorganization of ongoing programmes and personnel has helped to achieve a sharper focus on environmental activities and some agencies have been able to commit additional finances and personnel to them. Estimates of resources devoted to environmental and sustainable development activities tend to be tentative, in view of the transectoral nature of environmental action and its affinity to development work. Also, since agencies' priorities vary, estimates of earmarked funds are not comparable. Several have provided for budgets to make inputs to UNCED.

42. For planning and accounting purposes, UNDP has expanded its definition of environmental projects, which include those for environmentally sound and sustainable development, for sustainable improvements in living conditions (e.g. public health and disease control projects), and sectoral projects with environmental components (e.g. pest management). In 1988, projects accounting for US$299 million, that is, 24.1 per cent of the total value of UNDP projects, were considered environmental. UNDP collaborates with the World Bank and UNEP in implementing the pilot phase of the Global Environment Facility, which has a budget of US$1.3 billion. It plans to expand its environmental activities in the Fifth Country Programming Cycle (1992-1996) and has earmarked US$25 million for preparatory work under the heading of "Environmental Problems and Natural Resources Management".

43. By 1990 the World Food Programme (WFP) had assisted Governments in 155 projects with environmental components, with a value of US$1.2 billion or over one-third of all WFP assistance. The percentage of International Fund for Agricultural Development (IFAD) projects with a strong environmental rationale more than doubled during 1986-1990 and, by 1991, reversal of environmental degradation was a major objective in 80 per cent of IFAD's approved projects. Its 1992 budget provides for environmental assessment and natural resource management studies and the development of operational guidelines for sustainable agriculture. The FAO Council approved a programme budget of US$3.3 million for 1992-1993 for "Environment, Energy and Sustainable Development", which represents a substantial increase over its allocation of US$1.77 million for 1990-1991. In addition, FAO's technical programmes will contain environmental and sustainability components.

44. In 1989, UNICEF's Executive Board approved a special allocation of US$3 million for environmental programmes, with supplementary funding of US$3 million for 1992-1993. The International Oceanographic Commission (IOC) approved a 25-per cent increase in budget to support "environmentally sound and sustainable development operations" during 1992-1993. In 1990 UNDRO launched the Disaster Management Training Programme, costing US$5.7 million over three years. Under its regular programme, the United Nations Department of Technical Cooperation for Development (DTCD) began earmarking funds for environment-related activities, emphasizing catalytic initiatives.

45. UNESCO's proposed budget for 1992-1993 reflects a 10-per cent increase in allocations for environmentally sound and sustainable development, despite a 2.6-per cent reduction in total budget. WMO's Executive Council established a Special Trust Fund for 1990-1995,

based on voluntary contributions, for climatic and atmospheric environmental matters. In view of its expanding activities relating to atmosphere, climate, oceans, land and water, WMO's regular budget is expected to increase. During 1990-1991, WMO allocated US$74.9 million to environment-related activities. IMO's global programme for the protection of the marine environment received US$5 million in external support for 1990-1992. ILO's programme includes the priority area of "Environment and the World of Work" and provides for an increase of about 60 per cent in budgetary resources allocated to environment-related activities in 1992-1993 ($3.28 million), as compared to 1990-1991 ($2.05 million). UNIDO gave additional emphasis to environmental activities through a reordering of priorities, and ECLAC established a Professional staff position to reinforce its environmental action. UNEP's approved Programme Budget increased to US$180 million for the biennium 1992-1993. During the fiscal year 1990, 107 out of the World Bank's 222 loans had an environmental component, including 11 free-standing loans.

46. Increased programme budgets for environmental action may be considered an indicator of intensified action for sustainable development. Yet such budgets do not reveal the extent to which they are the result of recasting existing activities in an environmental light. More importantly, the incremental figures do not provide a measure of the organizations' effort to make erstwhile programmes environmentally sound by integrating environmental considerations into their design and implementation, as distinguished from allocations for discrete environmental initiatives, which may be unconnected to the mainstream of technical cooperation and capacity-building activities.

B. Policies and programmes

47. The actions undertaken by the United Nations system for environmentally sound and sustainable development have taken four main forms: (a) expansion, acceleration or intensification of activities for awareness-building, information dissemination, expert consultation, intergovernmental consultation and consensus-building, technical cooperation, training, research and development, and institutional networking and strengthening; (b) organizational adjustments and managerial follow-through to link environmental initiatives to development activities and to monitor and pursue traditional development objectives in tandem with environmental goals; (c) additional activities arising from clarification and strengthening of mandates for action for environmental assessment and management and for sustainable development; (d) global, regional and national-level support for the preparations for UNCED.

48. The Office of the Director General, Development and International Economic Cooperation (ODG/DIEC) established a joint task force of UNDP, UNICEF, UNFPA, WFP, IFAD which agreed to accentuate effort to incorporate environmental concerns in development activities, increase collaborative efforts to promote forestry and watershed management and promote environmental training. It also established the United Nations Solar Energy Group on Environment and Development, to prepare a technical report on new and renewable sources of energy. The United Nations Department of Technical Cooperation for Development (DTCD), in line with an Action Plan, has begun to adjust its programme of development advisory services to include environmental statistics, environmental policy guidelines, monitoring and assessment of technology for environmental soundness and environmental monitoring mechanisms. It has also prepared environmental management guidelines for mining and energy and on the role of the public sector in environmental management. DTCD gives priority to training in environmental management, including environmental impact assessment for personnel from developing countries and DTCD staff, and to technical assistance in energy efficiency and conservation.

49. The United Nations Department of International Economic and Social Affairs (DIESA) Task Force on Environment and Development monitors departmental activities with a view to incorporating environmental concerns in them. DIESA consolidated activities on energy and natural resources to establish a new branch and proposed a programme on development and environment for 1992-1997, under which analyses will be made of various issues of environment and development interactions and harmonization. DIESA's studies include quantitative analyses of scenarios to the year 2000 and beyond, based on alternative assumptions regarding policies and technological choices. DIESA has ongoing research programmes on environmental aspects of energy, water, transport, population and consumer protection. In 1992 DIESA will publish a handbook on integrated economic and environmental accounting and will promote its application through workshops and technical cooperation. DIESA will also continue its methodological work on environmental statistics.

50. The United Nations Conference on Trade and Development (UNCTAD) examined the interface between sustainable development and its work with reference to commodities, trade policy, technology and development finance (TD/B/1267). Its Trade and Development Board decided that sustainable development objectives, particularly reduction of poverty, should be incorporated into UNCTAD's work at the intergovernmental level, and that UNCTAD committees should consider activities for sustainable development within the context of their respective work programmes. In response to General Assembly resolution 45/210 of 21 December 1990, UNCTAD prepared an analytical paper on trade and environment as an input to UNCED. The United Nations Centre on Transnational Corporations (UNCTC) completed a study on transnational corporations and climate change, and disseminated criteria for sustainable development management. It prepared a report on lessons learned in industrial environmental protection and on requirements for disclosure of information on environmental hazards; a status report on the work being carried out in the United Nations system on hazardous technologies and safer alternatives to them; and proposals for a directory of such technologies and alternatives (E/C.10/1990/10). UNCTC conducted a questionnaire survey of the environmental management priorities of 200 of the world's largest transnational corporations in order to make available information and provide a model framework on policies and procedures for the environmentally sound management of transnational corporate activities. The United Nations Centre for Science and Technology for Development (UNCSTD) organized a conference on energy, climate and development; seminars on the desertification process and on biotechnology for food production in dry areas; and workshops on clean coal technologies and creative financing for environmentally sound development.

51. In September 1990, ECLAC held a regional meeting of government experts on the environment and sustainable economic and social development. The 1990 regional ministerial meeting adopted an action plan that aims at strengthening the capacity for political decision-making and actions to streamline the regional environmental cooperation. The plan's strategic principles include: encouraging subregional policies, plans, programmes and projects; supporting subregional agreements; encouraging the harmonization of environmental legislation and regulation; taking preventive action for environmental protection; supporting training, education and awareness-building; and strengthening international technical and financial cooperation. The priority areas in the action plan include environmental and resource management, institutional development, and pollution prevention and control. ECLAC's activities include: preparation of environmental management plans for sustainable agriculture in mountain ecosystems and for solid waste and toxic waste management in urban development; guidelines and provision of training in environmental impact assessment and environmental accounting; economic valuation of environmental management of marine resources; and technical cooperation to strengthen member countries' capabilities to implement environmentally sound and sustainable development.

52. In October 1990, ESCAP convened a ministerial-level conference on environment and development in Asia and the Pacific, which reviewed the state of the environment and environmentally sound and sustainable development in the region, regional cooperation, a regional strategy and global environmental issues. The conference adopted a policy declaration. In April 1991, ESCAP adopted the finalized regional strategy. ESCAP's concentration areas in sustainable development for 1992-1997 are: environmental awareness-building; greening of the development process; management of terrestrial ecosystems; and protection of the marine environment.

53. ECE organized a European regional conference in Bergen, Norway in May 1990 to review progress in implementing the recommendations of the World Commission on Environment and Development and to identify initiatives of relevance to the region. The ministerial declaration of the conference emphasizes environmental awareness and public participation, sustainable industrial activity, sustainable energy use, and the economics of sustainability. The fields covered by ECE's activities include: promotion of environmental impact assessment; economic instruments; linkages between environmental and trade policies; "Energy Efficiency 2000"; environmentally sound technologies; energy-labelling systems; and environmental improvement of transportation. The issue of how to design and implement environmental policies in concert, so as not to distort comparative advantage in trade, is vital to countries of the region. The region is advanced in terms of intergovernmental agreements for environmental management. Conventions are being prepared on the transboundary impact of industrial accidents and on the protection and use of transboundary watercourses and international lakes. Following ratification by 31 ECE members and the European Community of the 1979 Convention on Long-Range Transboundary Air Pollution, the 1988 Sofia Protocol concerning the Control of Emissions of Nitrogen Oxides or their Transboundary Fluxes entered into force. A new protocol on volatile organic compounds is under preparation as one of the measures to combat forest decline. In 1989, the Commission adopted the ECE Charter on Ground-Water Management and, in 1990, a Code of Conduct on Accidental Pollution of Transboundary Inland Waters. A Convention on Civil Liability for Damage Caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation was opened for signature on 1 February 1990 and a comprehensive Declaration on the Conservation of Flora and Fauna was adopted in 1990. A European Convention on Environmental Impact Assessment in a Transboundary Context was adopted in February 1991, providing for prior consultation among concerned parties.

54. ECA, in preparation for UNCED, convened a regional Conference of ministers and designated senior officials in Cairo in July 1991. At the conference a Cairo Common Position on the African Environment and Development Agenda was agreed. The agreed agenda gives priority to: achieving food self-sufficiency and food security; reversing deforestation and conserving wildlife; preventing and reversing desertification and mitigating the impacts of drought; ensuring effective management and use of water resources; managing coastal and marine resources; securing greater energy self-efficiency; and managing demographic change, population pressure and human settlements.

55. The United Nations University (UNU), in collaboration with Unesco, the International Federation of Institutes of Advanced Studies (IFIAS) and the International Social Science Council (ISSC), has initiated a programme to improve scientific understanding of the dynamics governing human interactions with the total earth system and to study social strategies and policy options to deal with global environmental change and promote sustainable development. UNU supports workshops and publications, conferences and research undertakings in the fields of energy, tropical forests, climate, oceans, and land use and management. Unesco's programme includes intersectoral and inter-agency projects in environmental education and information; the international geological correlation project;

natural hazards; the Man and the Biosphere Programme; the Intergovernmental Oceanographic Commission; and the International Hydrological Programme. Unesco's social sciences programme plans to elaborate long-term scenarios for sustainable development. The International Environmental Education Programme has been reoriented in line with the guiding principles of spreading environment-and-development literacy and targeting information towards different user groups. In September 1991, Unesco convened an International Forum on Sustainable Development to consider the interrelationships of population dynamics, environment, natural resources and development.

56. The Commission of UNCHS in its resolution 12/18 asked the Executive Director to link the policy directions of the Global Strategy for Shelter to the Year 2000 with the concept of sustainable development, and stressed that integrated planning and management of human settlements can be a powerful instrument in achieving sustainable development. UNIDO has established an Environmental Coordination Unit and adopted a programme with elements of: enhancement of staff capacity; training in use of basic tools, to promote ecologically sustainable industrial development; awareness-building; advisory assistance to developing countries in industrial environmental management, including industrial sectoral guidelines; and assistance in pollution abatement and promotion of clean technologies. In July 1991, UNIDO convened an international Conference on Ecologically Sound Industrial Development to build consensus on approaches to sustainable industrial development. The World Intellectual Property Organization (WIPO) is examining the role of industrial intellectual property, particularly in regard to patents and licensing and technology transfer, in the context of promoting the implementation of the Montreal Protocol on Substances that Deplete the Ozone Layer. The issue of reconciliation of intellectual property rights with the need to make environmentally sound technologies available on preferential and concessionary terms to the developing countries, to enable them to fulfil their obligations under global environmental agreements, has come to the fore in other fields as well. IAEA has published a Code of Practice on International Transboundary Movement of Radioactive Waste which requires that transboundary movement should take place only in accordance with internationally accepted safety standards with the prior notification and consent of sending, receiving and transit States, and in accordance with their respective laws and regulations.

57. The World Food Programme (WFP) has introduced environmental considerations into its activities, both at the farm level and in area development. WFP assistance is focused on poor areas where soil tends to be depleted, erosion advanced, rainfall inadequate and access by road limited. It places emphasis on sound project design rather than formal environmental impact assessment, the objective being the incorporation of environmental factors at all stages of the project cycle. WFP increasingly meets the initial costs of the environment-related investments of its projects to help enhance long-term food production potential in target areas, even as it provides relief to meet short-term and emergency food needs. It also produces guidance material, trains staff and reviews the environmental implications of its projects in the fisheries, forestry, farming and energy sectors.

58. The Twenty-fifth Conference of FAO decided to intensify the organization's interdisciplinary work: to ensure integration of environmental considerations into all relevant activities; to give higher priority to prevention of environmental degradation; and to strengthen FAO's cooperation with other organizations. FAO follows an operational definition of sustainable development focusing on agriculture, forestry and fisheries. Its Interdepartmental Working Group on Environment and Sustainable Development and ad hoc groups and task forces review environmental matters as they relate to FAO's programme. In collaboration with the Government of The Netherlands, in April 1991 FAO convened an international conference on agriculture and environment to address issues and perspectives of agricultural growth and sustainability, technological options and research requirements,

strategies for sustainable agricultural development, and instruments and tools for their implementation. FAO, in collaboration with others, provided advice to the Ad Hoc Working Group of Legal and Technical Experts on Biological Diversity, and participates in the work of the Intergovernmental Panel on Climate Change (IPCC). FAO promotes the design and application of integrated approaches to agricultural and rural development. Its Legal Office is strengthened to coordinate work on proposed instruments on forestry and biological diversity, and it has launched a programme in the field of pesticide law to promote adoption of the principles of the International Code of Conduct for the Distribution and Use of Pesticides. FAO's sixteenth Regional Conference for Africa endorsed a scheme for the conservation and rehabilitation of African lands. The Tropical Forestry Action Plan is now being implemented in 83 countries and involves subregional-level cooperation with various bodies, including the Treaty for Amazonian Cooperation, the Commission on Environment and Development of Central America, and the Intergovernmental Authority for Drought and Development (IGADD). FAO has drafted a common framework for world forest resource assessment and is preparing a review of debt-for-nature swaps to advance the application of the framework in forestry. In fisheries, a proposal to establish a working group under the Group of Experts on Scientific Aspects of Marine Pollution (GESAMP) and guidelines to assess environmental impacts of coastal aquaculture have been prepared.

59. In May 1989, the World Health Assembly adopted WHO's approach to sustainable development. The Assembly gave support to the Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal, and to continued and accelerated efforts to provide safe drinking-water and sanitation to all people. WHO has established a Commission on Health and Environment to guide its application of principles of sustainable development, and to bring to the attention of UNCED the full implications of the relationship between health and the environment. The Governments of the WHO European region have adopted a charter on health and environment. The International Labour Conference at its 77th session adopted a resolution on environment, development, employment and the role of ILO, and a convention and recommendations concerning safety in the use of chemicals at work. ILO prepares codes of practice on major hazard control and conducts environmental training to support the involvement of employers' and workers' organizations in environmental improvement. Its working environment programme increasingly addresses the interrelationship between the working and the general environment. The International Civil Aviation Organization (ICAO) is examining technical, economic, policy and legal aspects of the environmental impacts of civil aviation and has established a multidisciplinary working group to investigate environmental problems and make recommendations to the ICAO Council on how to address them.

60. ILO plans to convene a tripartite advisory meeting on environment and the world of work to advise ILO's Governing Body on future work relating to the subject and ILO's follow-up to the UNCED. Its initiatives include technical assistance related to major hazard control; provision of guidance and recommendations on the quality of the working environment and occupational safety; inclusion of environmental elements in vocational training; provision of information and guidance on the role of labour and labour inspection systems in environmental protection; and research relating to employment, development and the environment. ILO has established a small unit under the Assistant Director-General for Inter-Departmental Programmes to promote, monitor and coordinate its environment-related activities and has also established an environment-related Project Monitoring System for environmental review of ILO's operational projects.

61. WMO's activities relating to sustainable development include the World Weather Watch, the World Climate Programme, hydrological and water resources activities, environmental pollution monitoring and research, and weather prediction and tropical

meteorology research. WMO's Executive Council authorized continuation of the Intergovernmental Panel on Climate Change (IPCC) as a joint WMO/UNEP body to support negotiation of a framework convention on climate change, to update assessments of scientific information periodically, to undertake analyses of various options, to evaluate special problems of developing countries, and to ensure the active participation of these countries. In September 1990, WMO and UNEP convened an open-ended ad hoc working group in preparation for a framework convention on climate. The Second World Climate Conference was held in November 1990 in Geneva. Its Ministerial Declaration set out elements of a global strategy and policy considerations for action and made recommendations for negotiations on a framework convention on climate change. WMO, along with UNEP and other concerned agencies, backstops the work of the Intergovernmental Negotiating Committee (INC) for a framework convention on climate.

62. WMO assisted in providing scientific assessments of the adequacy of the Montreal Protocol on Substances that Deplete the Ozone Layer and its amendments. In cooperation with IAEA and the Commission of the European Communities (CEC), it carries out studies to predict atmospheric and water transport and dispersion of radioactive and toxic chemical contamination from accidental releases. It is organizing a global communication and prediction system for such contamination and a system of coordinated international meteorological support to respond to marine pollution incidents, especially to predict movement of oil spills on the high seas. WMO is preparing an international conference on water and the environment, to be held in January 1992 in Dublin, Ireland. It implements the Global Climate Observing System (GCOS) and the enhanced World Climate Programme, including the components of World Climate Data Monitoring Programme, World Climate Applications and Services Programme; World Climate Impact Assessment and Response Strategies Programme and World Climate Research Programme.

63. IMO implements the Global Programme for the Protection of the Marine Environment, including preparation for and response to environmental emergencies, prevention of marine pollution from transnational disposal of wastes, environmental impact assessment of port development, and assistance to countries in legislation and institutional strengthening. In 1990, Governments adopted the International Convention on Oil Pollution Preparedness, Response and Cooperation, and the Contracting Parties to the London Convention agreed that it be applied not only in countries' territorial waters, but also in their Exclusive Economic Zones. IMO's Council, by its resolution LDC 40(13), agreed to consider the establishment of a global mechanism to coordinate protection of the marine environment; a global mechanism to address land-based sources of pollution and waste management in seas and oceans; the introduction of stringent controls on marine pollution; and mechanisms for environmentally sound technology transfer and technical cooperation for the developing countries.

64. UNICEF has decided to use its experience in social mobilization and multisectoral work at the community level to improve children's well-being while protecting the environment, and has increased support to social forestry and village woodlots. Its country programming has begun to highlight environmental concerns. UNICEF's programmes relating to clean water, improved sanitation, hygiene education, control of diarrhoeal diseases and to national and child health education services contribute to environmental improvement and continue to receive priority. UNICEF has begun to assess the impact of environmental degradation on children on a pilot basis as part of the Amazon Basin Subregional Programme. In several country programmes (e.g. in Botswana, Madagascar, Myanmar, Nepal), UNICEF has tried to build mutual support between action for sustainable rural development and action for child welfare.

65. The Governing Council of the International Fund for Agricultural Development (IFAD) at its thirteenth session considered an analysis of and recommendations on operational issues of environmental sustainability and rural poverty alleviation. Following the Council's endorsement of its Principles, Criteria and Environmental Framework of Operations, IFAD's country-level activities are appraised and monitored not only from the standpoint of its customary criteria of alleviating rural poverty and improving the productivity of small farmers, but also in terms of the activities' contribution to environmental management. At its fourteenth session, IFAD's Governing Council endorsed the preliminary development and testing of a programme comprising natural resource management, environment-related pre-investment studies, and development of operational guidelines for the project cycle, keeping in view sustainable development objectives. This pilot programme will be reviewed in 1993, with a view to institutionalizing its key elements.

66. UNDP has consolidated the policy coordination and promotional role of its inter-programme environmental action team. UNDP advances awareness-building for sustainable development at country and subregional levels through its Special Programme Resources, the Indicative Planning Figures and Trust Funds. It collaborates with the World Bank and UNEP in implementing the pilot phase of the Global Environment Facility (GEF). UNDP coordinates pre-investment studies and technical assistance and ensures their consistency with human resources development and other development activities at the national level. UNDP provides support for the developing countries' participation in the preparatory process of UNCED and for the preparation of national reports on environment and sustainable development. It has prepared environmental management guidelines and guidelines for environmentally sound projects for training its staff, so that its country programming process and technical cooperation projects will be environmentally sensitive. It assists countries in establishing sustainable development institutional networks and supports developing countries' efforts to implement actions for the protection of the ozone layer, under the Vienna Convention and the Montreal Protocol.

67. At its fifteenth session UNEP's Governing Council stressed that the Council's key functions included: promoting international environmental cooperation and recommending policies to that end; providing general policy guidance for the direction and coordination of environmental programmes within the United Nations system; keeping under review the world environmental situation to bring to the attention of Governments emerging environmental problems of wide international significance; promoting international scientific contributions to the acquisition, assessment and exchange of environmental knowledge and information; and maintaining under continuing review the impact of national and international environmental policies and measures on developing countries, as well as the problem of additional costs that may be incurred by them in implementing environmental programmes and projects. UNEP's Governing Council also called for concentration of the programme on major problem areas, namely: combating climate change and global warming; controlling depletion of the ozone layer and transboundary air pollution; protection of the quality of freshwater; protecting oceans and coastal areas and resources; protecting land resources by combating deforestation and desertification; conserving of biological diversity; environmentally sound management of biotechnology; environmentally sound management of hazardous wastes and toxic chemicals; and protection of human health conditions and quality of life, especially the living and working environment of poor people.

68. UNEP's collection, analysis and dissemination of scientific information and data in respect of major environmental problems have accelerated and efforts to establish international consensus on the ways and means of addressing the problems have intensified. The coming into effect of the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer, its strengthening in 1990 and the establishment of the Interim Multilateral Fund for the Implementation of the Montreal Protocol provided a concrete example of practical integration

of environmental objectives in development and in international economic cooperation. Technical work and negotiations on climate change, biodiversity and hazardous wastes have similarly reflected an integrative approach to environmental management. In response to requests from Governments, UNEP, in collaboration with other organizations, has been providing assistance to countries with regard to: environmental legislation; institution-building; environmental assessment and management and their integration into development policy and planning. UNEP participates in the strategic planning of GEF operations, helps ensure that the global policy framework for GEF is consistent with existing conventions and related legal instruments and agreements, and helps developing countries to define their needs to deal with the global environmental issues supported by GEF. UNEP disseminates information on existing and emerging technological developments, coordinates research and data-gathering, has established the Scientific and Technical Advisory Panel (STAP) to backstop the operations of GEF, and, in collaboration with UNDP, provides the scientific and technological support needed for institution-building and training. At its sixteenth session UNEP's Governing Council called for more effective and comprehensive coordination and direction of environmental activities in the United Nations system, supported the strengthening of UNEP headquarters, recognized that concern for global environmental problems and resource allocations to combat them must complement efforts to support sustainable development, and requested the Executive Director to ensure that all documentation for future Council sessions would reflect an integrated approach to developmental and environmental concerns, as appropriate.

69. The World Bank conducts research on the underlying causes of environmental degradation and the feasibility of appropriate policy interventions; uses environmental assessment in preparing and evaluating Bank-financed projects; has increased lending for environmental and population projects; provides training; and promotes international environmental cooperation and the flow of environmental information. Its priority environmental problem areas are: destruction of natural habitats; land degradation; degradation and depletion of freshwater resources; urban, industrial and agricultural pollution; and the degradation of the global commons. The Bank addresses those problems through national environmental action plans, country-level analytical and advisory work, and lending for free-standing environmental projects, for incorporation of environmental components in development projects and for structural adjustment. The Bank's work builds on environmental profiles, strategy documents and sectoral and economic analyses undertaken by countries or other agencies. The Bank's policy includes the financing of projects and policies that meet both economic and environmental criteria, drawing on technological progress. It assists in international efforts to mobilize resources to implement environmental projects when concessionary finance is required, and plans to give added emphasis to lending for population activities. It manages GEF, in collaboration with UNDP and UNEP, appraises and supervises investment projects and administers the GEF trust fund. The Bank's official analysis of the world development situation increasingly reflects environmental sensitivity and its 1992 World Development Report will be on the theme of Environment and Sustainable Development.

70. Awareness of and policy-level commitment to environmentally sound and sustainable development have increased significantly throughout the United Nations system. There have been a number of new initiatives and expansions of ongoing programmes. While sectoral programmes have become stronger with the addition of environmental components, cross-sectoral issues that are critical for achieving environment-development integration have not received significant attention. These include: the linking of international environmental cooperation with international economic cooperation; the measurement of the sustainability of development and its relationship to environmental indicators; tradeoffs and reconciliation between sectoral or economic policies and environmental policies; integration of the environment into national economic planning and public finance; extension of the "polluter

pays" principle to global and regional levels and its operational implications; distribution of the costs and benefits of environmental management among countries and among groups; long-term gains to the world economy and human well-being from substituting lifestyles and production patterns that conserve resources, in place of wasteful patterns; macro-economic valuation of environmental change; estimation of the gains to the world economy from international transfer of environmentally sound technology to where it is needed most; economic gains from reduced pressure on natural resources as a result of control of population growth and its spatial distribution; and the contribution to poverty alleviation from programmes of environmental conservation and improvement. The programmes of the United Nations system will need to give particular attention to these and similar cross-sectoral activities to reinforce the political will behind national action and international cooperation for sustainable development.

71. The balance between activities aimed at conceptual clarification, advocacy, awareness-building and expert consultations and those aimed at strengthening countries' capacities to implement environmental management and sustainable development merits close scrutiny. Over the last three years there has been a plethora of national, regional, global expert and other meetings and reports to assess what is sustainable development, how it might be achieved and what inhibits its achievement. In contrast, the strengthening of administrative, managerial, technical, legislative and policy, planning and coordination capacities in the developing countries for environmental management and sustainable development has been meagre in relation to the needs. Further, contributions to sustainable development through improved international economic relations by way of trade, transnational investments, transfer of technology, debt relief and restructuring have been very limited. Furthermore, there is as yet little indication of the extent to which adjustments in the composition and distribution of economic development have received particular attention from the standpoint of their potential contribution to environmental protection and improvement. There is now a vast body of official and other literature and declarations on sustainable development, but there is not yet sufficient evidence of transformed circumstances or mobilization of finance and strengthened national capacities to design and implement sustainable development policies and programmes.

C. Coordination

72. Environmental concerns and actions cut across many sectors and effective environmental management requires sectoral coordination. Application of the "Precautionary Principle" in dealing with environmental problems and achieving integration of environmental considerations into development policies, programmes and projects require coordination among sectors, departments and agencies. Further, significant linkages of international economic relations to environmental management, as well as to international environmental cooperation call for coordination between financial, economic, trade and foreign investment institutions and environmental institutions. There is a trend towards improving environmental coordination in most countries and in the United Nations agencies, but the institutional forms and practical means this coordination has assumed differ. Effective coordination and direction for sustainable development require that environmental progress be measured in relation to development indicators and that the two be linked from the standpoint of drawing conclusions for policies and planning.

73. At the international level, the Governing Council of UNEP, the System-wide Medium-Term Environment Programme (SWMTEP), the Administrative Committee on Coordination (ACC) and the Designated Officials on Environmental Matters (DOEM) provide the main mechanisms for policy and programme coordination. In addition, there exist a number of subject-specific inter-agency consultative and other arrangements for coordination, e.g. the

Ecosystems Conservation Group, the Earthwatch Task Force, the Inter-Agency Working Group on Desertification. The issue of how to improve environmental coordination in the United Nations system is being considered in different forums, including UNEP's Governing Council and UNCED. At its sixteenth session UNEP's Governing Council recommended that more effective arrangements be provided to ensure effective and comprehensive coordination and direction of environmental activities in the United Nations system. In response to General Assembly resolution 44/229 of 22 December 1989 the Secretary-General will submit to the fourth meeting of the UNCED Preparatory Committee a report on structure and responsiveness of the United Nations system in dealing with major environment issues, which contains specific proposals for improving system-wide coordination for environment and sustainable development. The 1993 mid-term review of SWMTEP II (1990-1995), which aims at environmentally sound and sustainable development, will also provide an opportunity to monitor and examine effectiveness of the arrangements made in the United Nations system for coordination in this regard. The General Assembly, moreover, is scheduled to review in 1993 the whole subject of restructuring and revitalization of the United Nations in the economic, social and related fields.

IV. INTERNATIONAL COOPERATION ON GLOBAL ENVIRONMENTAL ISSUES

A. Progress of action

74. The Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer entered into force on 22 September 1988 and 1 January 1989, respectively. So far, 79 countries and the European Economic Community (EEC) have become Parties to the Convention and 73 countries and the EEC have become Parties to the Protocol. The First Meeting of the Conference of the Parties to the Vienna Convention and the First Meeting of the Parties to the Montreal Protocol designated UNEP as the secretariat for the Convention and its Montreal Protocol. The Second Meeting of the Parties to the Montreal Protocol, held in London in June 1990, adopted several far-reaching provisions and decisions including: (a) the adjustments to the Protocol, requiring parties to phase out the consumption of five chlorofluorocarbons (CFCs) and three halons by the year 2000; (b) the Amendment to the Protocol, requiring, *inter alia*, Parties to phase out the consumption of 10 other chlorofluorocarbons and carbon tetrachloride by the year 2000 and to phase out the consumption of methyl chloroform by the year 2005; (c) a strengthened provision for the expeditious transfer of the best-available, environmentally safe substitutes and related technologies to the Parties that are operating under paragraph 1 of article 5, whereby the transfers occur under fair and most favourable conditions; (d) establishment of a financial mechanism to meet the incremental costs of developing countries, including a multilateral fund as well as other multilateral, regional and bilateral cooperation, and an executive committee to administer and control the fund; (e) a resolution setting out guidelines on the use of transitional substances such as hydrochlorofluorocarbons; (f) the procedure and institutional mechanism for determining non-compliance with the provisions of the Protocol and for treatment of Parties found to be in non-compliance; and (g) a decision to reconvene the assessment panels to compile into supplementary reports any new information on the scientific, environmental, economic and technical developments since the completion of the first assessment process in August 1989.

75. The Amendment to the Montreal Protocol will enter into force on 1 January 1992, provided 20 countries ratify it. The Interim Multilateral Fund came into operation from 1 January 1991 for a period of three years. The Fund will support activities, including projects, to assist eligible developing countries to comply with the Montreal Protocol, with special

emphasis on projects related to conversion from using ozone-depleting substances to environmentally acceptable substitutes and related technologies. The Secretariat for the Fund is established in Montreal, Canada. An agreement among the implementing agencies of the Fund, namely, UNDP, World Bank and UNEP, provides for their cooperation with the intergovernmental Executive Committee. The Third Meeting of the Parties (June 1991) approved an annex to the Protocol of a List of Products containing controlled substances. After a specified time, Parties which do not object to the annex will have to ban the import of these products from non-Parties. The updated reports of the Assessment Panels will be ready by the end of November 1991 and will be disseminated by the end of January 1991. An open-ended working group of the Parties will consider these reports and recommend to the Fourth Meeting of the Parties in 1992 any necessary further adjustments and amendments.

76. In August 1990, the Intergovernmental Panel on Climate Change adopted its first assessment report and the reports of Working Group I (science), Working Group II (impacts) and Working Group III (response strategies). Pursuant to General Assembly resolution 45/212 of 21 December 1990, the Panel will provide technical and scientific assistance in response to requests from the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change. The Second World Climate Conference in November 1990 noted, *inter alia*, that, notwithstanding scientific uncertainties, nations should now take steps towards reducing sources and increasing sinks of greenhouse gases through national and regional actions. It stressed that a first step was to stabilize emissions of greenhouse gases not controlled under the Montreal Protocol and called for negotiations, without delay, on a framework convention containing appropriate commitments and any related instruments. It recognized the special situation and needs of the developing countries and agreed that consideration be given to funding facilities, including the Global Environment Facility, a clearing-house mechanism, and a new, possible international fund for adequate, additional and timely financial resources, and to institutional arrangements for the developing countries.

77. The General Assembly in its resolution 45/212 of 21 December 1990 further decided to establish a single intergovernmental negotiating process under its auspices, and supported by UNEP and WMO, for preparation, by an Intergovernmental Negotiating Committee (INC), of an effective framework convention on climate change and also decided to establish a voluntary fund to support participation of the developing countries in the negotiation process. The INC held its first session in February 1991 and established two Working Groups to assist it: Working Group I to deal with appropriate commitments to reduce greenhouse gas emissions, with additional financial resources to enable developing countries to fulfil their obligations under the convention, and with technology transfer and the special needs of developing countries; and Working Group II to deal with legal and institutional mechanisms to prepare the framework convention. The Committee adopted guidelines for the negotiations and for organizing the Working Groups, and procedures for holding meetings and for drafting the convention. By September 1991 the INC had held three sessions, addressing issues that include the principles guiding the framework convention, such as sovereignty, equity, right of development and "Precautionary Principle", nature and scope of commitments of countries to stabilize greenhouse gas concentrations in terms of sources and sinks, means of financing the convention's implementation; transfer of technology to the developing countries to enable them to fulfil their commitments, pledges and carry out the review process; and research and systematic observation to backstop implementation. The negotiations aim at preparing a draft framework convention for signature at UNCED in July 1992 in Rio de Janeiro, Brazil.

78. Pursuant to decisions 15/34 (1989) and II/5 (1990) of the Governing Council of UNEP, three sessions of the Ad Hoc Working Group of Experts on Biological Diversity and one session of the Sub-Working Group on Biotechnology were held. Subsequently, two sessions of the Ad Hoc Working Group of Legal and Technical Experts on Biological Diversity were held. These meetings resulted in agreed elements to be contained in a convention on biological

diversity and a draft convention on biological diversity was prepared by the UNEP secretariat at the request of the Ad Hoc Working Group of Legal and Technical Experts. The second session of the Ad Hoc Working Group of Legal and Technical Experts, held in March 1991, adopted its rules of procedure, elected its Bureau and decided to establish two sub-working groups. The first sub-working group addresses: fundamental principles, general obligations, measures of *in situ* and *ex situ* conservation and financial aspects of such measures, and relationship with other legal instruments. Sub-Working Group II addresses: access to biodiversity and related technologies, including biotechnology, technology transfer, technical assistance, financial mechanisms, and international cooperation. The Ad Hoc Working Group of legal and technical experts was renamed the Intergovernmental Negotiating Committee for a Convention on Biological Diversity (INCCBD), which is negotiating a draft convention and considering issues including: fair distribution of rights to and benefits from biological diversity; the role of intellectual property rights in access to and transfer of technology; the means of provision of technical resources and adequate, new and additional finance to developing countries to assist them to fulfil their obligations under the convention. The negotiations aim at preparing a legally binding convention ready for signing at UNCED in July 1992 in Rio de Janeiro, Brazil.

79. As of September 1991, 56 States and the European Economic Community had signed the Basel Convention on the Transboundary Movement of Hazardous Wastes and their Disposal, which was adopted in March 1989. The interim secretariat for the Basel Convention commenced its activities in November 1989, focusing on the implementation of resolutions adopted by the Conference of Plenipotentiaries held in Basel, including the development of a protocol on liability and compensation. The Governing Council of UNEP called upon all States to sign and ratify the Convention and to strengthen their cooperation in problem areas within its scope. The Council also considered that a comprehensive approach to hazardous waste was needed in order to minimize or eliminate the generation of hazardous wastes, and brought this to the attention of the Preparatory Committee of UNCED. The second meeting of the Preparatory Committee will consider the environmentally sound management of waste. The Ad Hoc Working Group of Legal and Technical Experts on Liability and Compensation met in March 1991 for the second time to address issues of international liability and compensation, the procedures for enforcement, and mechanisms and procedures for such compensation, with a view to developing a comprehensive set of elements that might be included in a protocol to the Basel Convention. As of September 1991, the Convention had received 13 ratifications; it needs 20 in order to come into effect. In January 1991, the Governments of the States members of the Organization of African Unity (OAU) adopted the Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movements and Management of Hazardous Wastes within Africa, an African agreement which runs parallel to the Basel Convention, indicating the growing political will to address the problems on transboundary movements of hazardous waste and their disposal.

80. UNEP's Governing Council at its sixteenth session requested the Executive Director to prepare draft elements of an international strategy and action programme, including technical guidelines, for the environmentally sound management of hazardous waste. It is envisaged that the draft technical guidelines will be considered for eventual adoption by the first meeting of the Conference of Parties to the Basel Convention. The Council appealed to Governments and appropriate international forums, taking economic costs into consideration, to consider alternative cleaner production methods, including raw-materials reduction, product substitution and clean production technologies and processes, as a means of implementing a precautionary approach in order to minimize or eliminate the generation of hazardous wastes and optimize the use of raw materials, water, and energy.

81. In May 1989, the Governing Council of UNEP adopted the Amended London Guidelines for the Exchange of Information on Chemicals in International Trade, incorporating the prior informed consent procedure. All exporting countries are expected to participate in the procedure. In November 1989, the FAO Conference agreed that the procedure be incorporated into the International Code of Conduct on the Distribution and Use of Pesticides. FAO and UNEP have established a joint panel to assist Governments in the implementation of the prior informed consent procedure for chemicals. Draft proposals for an intergovernmental mechanism for risk assessment and management of chemicals are being prepared, following UNEP Governing Council decision 16/35, part II of May 1991.

B. Mobilization of new and additional finance

82. In November 1990, 25 developed and developing countries agreed to establish the Global Environment Facility, to be implemented jointly by the World Bank, UNDP and UNEP. The Facility provides concessional funding for investment projects and related activities in connection with: slowing down global warming through energy conservation, use of renewable energy sources, forest management and reforestation; conservation of biological diversity; protection of international waters, including the marine environment, against transboundary pollution; and halting depletion of the ozone layer by way of a transition from production and use of chlorofluorocarbons, halons and other harmful gases to appropriate substitutes. A Scientific and Technical Advisory Panel advises GEF's three implementing agencies and has drafted criteria for eligibility and priorities for project selection for financing under GEF. Fifteen environmental protection projects and eleven technical assistance projects, accounting for about US$215 million and US$59 million respectively, are included in GEF's programme for 1991. The pilot phase of the programme will extend over three years from 1 January 1991 and will be of the order of at least 1 billion Special Drawing Rights. So far, over twenty countries, eight of which are developing countries, have contributed about US$800 million to the GEF fund. As at September 1991, the Interim Multilateral Fund for the Implementation of the Montreal Protocol had increased from the initial $160 million to $200 million for the period 1991-1993. The Executive Committee of the Interim Multilateral Fund has approved the work programmes of the Fund's three implementing agencies, UNEP, UNDP and the World Bank, and has also adopted guidelines for project preparation and criteria for project eligibility.

V. OUTLOOK ON SUSTAINABLE WORLD DEVELOPMENT

83. Awareness of environmental issues and of their linkage to development issues has been growing since the inception of UNEP and has grown greatly during the last four years. Preparations for UNCED and the sustained momentum of intergovernmental negotiations and agreements on major environmental issues have helped in mobilizing the political will for action for sustainable development. The imperative of concerted action at global, regional, subregional and national levels to prevent and contain environmental damage and to use optimally the potential of the environment for socio-economic development is increasingly reflected in agreed measures. The philosophy and principles of sustainable development reflected in the United Nations Environmental Perspective to the Year 2000 and Beyond are being translated into policies, programmes, mechanisms, procedures and institutions.

84. As technologies to prevent and control environmental degradation and to conserve natural resources have advanced, the environmental challenge itself has become more complex. World population has exceeded 5.3 billion, with about 4 billion in the developing countries, in many of which absolute poverty has increased, placing severe stress on fragile

resource bases and ecosystems. By the year 2000, one billion more people, whose needs have to be met, will inhabit the earth. Land degradation and desertification, deforestation, freshwater pollution, marine pollution, accumulation and transport of hazardous and toxic wastes, air pollution, accumulation of greenhouse gases and the risk of climate change, loss of biodiversity, depletion of the ozone layer, congestion and insanitary living conditions have assumed such proportions as to make international cooperation of the utmost urgency. To provide the common ground of mutual interest and global solidarity on which countries can base their actions for environmental management and sustainable development is a paramount challenge before the United Nations today.

85. Economic development and diversification have made it possible for many developed countries to protect and improve their environment. Tougher regulations, changing consumer preferences, cleaner technologies, more efficient energy use, recycling of products and new materials have helped make this possible. In Singapore, a developing country, several indicators of urban environmental quality are comparable to the best-known levels. Yet, for many countries, economic stagnation, excessive dependence on natural resources for economic growth, and marginalization in the world economy have meant growing environmental degradation. Economic growth is often accompanied by serious air and water pollution, urban decay and resource degradation, while mass poverty and resource-wasting lifestyles obstruct sustainable development. The prevailing disparities among countries and regions in economic development and in environmental management present both a daunting challenge and an opportunity. The growing consensus and solidarity in dealing with global environmental issues, the improved prospects of world peace resulting from the end of the cold war, and the reinforced confidence in the United Nations can lead to great progress in international cooperation for environmental management and for sustainable development. But the process needs to be guided with imagination and sensitivity.

86. It is unlikely that environmental conditions will improve if the living conditions and livelihoods of the majority of the poor do not improve. Seventy-five per cent of the world's people are in the developing countries, earning only 15 per cent of its income. About 95 per cent of the increase in the labour force between now and the year 2000 will occur in those countries. In 1985, over 1.2 billion people lived in absolute poverty, with an income of less than a dollar a day, of which 550 million were in South Asia, 175 million in sub-Saharan Africa, 275 million in East Asia and 75 million in Latin America and the Caribbean. By the year 2000, the poor in sub-Saharan Africa will have increased to 275 million. Over two-thirds of the people in Africa lack access to safe water, and even in East and South-east Asia, where economic growth has been notable, more than half the people lack access to safe water and basic health care. Both the environmental conditions and the economic growth prospects of several countries of East and Central Europe cause serious concern and need urgent and large-scale international assistance. While recognizing the globality and transnational character of major environmental problems, and also the issues of intergenerational equity that they pose, it is essential to recognize the geographical differences in the state of the environment and of development within and among countries, as well as in the countries' financial, technological and institutional capacities to deal with these problems. In the absence of a collective yet differentiated approach to action, sustainable development will remain elusive.

87. As food needs grow with population, food availability per capita is declining in many countries as the productive land base shrinks. In sub-Saharan Africa per capita arable land declined from 0.5 hectares in 1965 to 0.3 hectares in 1987. More than one quarter of sub-Saharan Africa's land area of 750 million hectares is severely or moderately desertified. For countries whose economic growth directly depends on productivity of natural resources, and which have nothing to export except commodities and raw materials, resource scarcity and degradation, population growth and widespread poverty, combined with high debt-service

payments, unfavourable terms of trade, restricted access to export markets and meagre foreign investments and financial flows, pose extraordinary challenges for policy. Their environmental and development crisis is often compounded by civil strife, poor governance and large-scale migrations of people in the wake of drought, famine and political turmoil.

88. Development cooperation and national policies are becoming increasingly sensitive to environmental consideration in projects and programmes. But actual achievements in this regard, including the economic and institutional ramifications, are not yet clear. Equally importantly, the participatory and equitable nature of development as a prerequisite for successful environmental management has received little attention, nationally and internationally. Accelerated economic development, its diversification to reduce pressure on natural resources, equity in the distribution of its benefits and reduction of mass poverty should receive top-priority attention in national action and international cooperation for worldwide progress in environmental management.

89. The pattern of international economic relations must change to bring about environmental protection and improvement and sustainable development. Gross imbalances in world trade are at the root of some of the world's major environmental problems. Primary commodities constituted 98 per cent of African exports in 1981 and 83 per cent of Latin American exports in 1980. Commodity exports as a percentage of total exports exceed 90 per cent for most least-developed countries. Unstable international commodity prices have damaged land, water, forests, coastal areas and marine resources, which are the basis of commodity exports. To earn the needed foreign exchange, despite declining commodity prices, many developing countries have excessively harvested or mined natural resources. Despite dramatic declines in commodity prices, developing countries' revenues from commodity exports remained relatively stable during 1973-1988 while their export volumes nearly doubled. In contrast, the East and South-east Asian countries, which were able to diversify and export processed products, benefited from better terms of trade. Technological innovation in materials and packaging has reduced industrial countries' dependence on raw materials imports. Consequently, terms of trade may not improve for commodity exports for which economic substitutes exist. Good macroeconomic management, timely diversification, prudent structural adjustment and the securing of gains in economic efficiency help to mobilize the finance and lower the pressure on natural resources for better environmental management. International economic cooperation and national economic and environmental policies have to coalesce to make this happen.

90. Paradoxically, the imposition of tariff and non-tariff barriers in importing countries is obstructing countries' efforts to diversify their economies, secure export growth consistent with structural adjustment, relieve pressures on natural resources, and mobilize finance for environmental management. Industrial country tariffs on processed exports from the developing countries are at levels that deny the world potential economic gains from the optimal international division of labour. Projected increases in developing countries' agricultural export revenues from lowered trade barriers in OECD countries range from 2 to 40 per cent. More that 50 per cent of the European Community's imports are affected by non-tariff trade barriers and for Japan and the United States the percentage may be more than 40 per cent. Efficient land management and adequate finance for environmental investments in agriculture may be impossible in many developing countries in the face of massive subsidization of food production and exports from the developed countries. Negotiations still remain inconclusive in the GATT Uruguay Round of negotiations on agricultural subsidies and on quotas and other non-tariff barriers against textiles and clothing imports. Trade protectionism alone costs the developing countries US$55 billion annually, which is more than what they received in 1989 by way of official loans and grants. Governments have to reckon the costs that restrictive and distortionary trade policies are imposing on the world in terms of global environmental degradation. The longer such policies continue, the more

expensive and difficult it becomes in practical terms to rehabilitate the world's environment. Correspondingly, production processes, product mixes and choice of technologies in the developing countries have to give priority to energy efficiency, resource-saving, prudent environmental management as well as broad-based participation of people in the process of economic development.

91. As sustainability of development receives attention as a guiding principle for national policies, conditionality in trade and aid has come to the fore as a contentious issue. Some countries may be using trade policy as an instrument of enforcing environmental management standards and practices in trading partner countries. Legitimate environmental standards in the importing countries have to be fulfilled by the exporter, but environmental grounds must not be used as an excuse to protect domestic markets from competitive imports. Information concerning environmental standards and how to fulfil them must be made available transparently and well in advance, so as not to disrupt trade and cause economic harm to the exporting countries, notably developing countries and countries in transition to market economies which have a limited capacity to adjust. Trade restrictions emanating from global environmental agreements should be designed and implemented within the framework of GATT. Liberalization of trade under the GATT Uruguay Round of negotiations has to be related to achieving environmentally sound and sustainable development. Similarly, criteria of environmental soundness and sustainability in aid must be subjected to mutual deliberation and agreement by the concerned parties.

92. The emergence of trading blocks in Europe and in North America makes access to developed country markets even more challenging. If the developing countries' exports are denied favourable or competitive access to developed country markets, the prospects of reduced world poverty will be remote. Without fair and open trade practices and technical and economic cooperation programmes, developing countries will be severely constrained in implementing the policies and programmes of environmental management. Legitimate differences in countries' circumstances and capacities have to be recognized and corresponding responsibilities differentiated. Further, judgements about sustainable and environmentally sound production practices should be arrived at only after due consultation with the trading partners, so as not to harm the economic and environmental interests of the latter. Recent protests over restrictions on tropical hardwood product imports on grounds of unsustainable production practices is a case in point.

93. Developing countries lack the investment resources necessary to reverse land degradation, desertification and deforestation, to clean polluted rivers, lakes and coastal areas, and to make the transition to technologies that would reduce greenhouse gas emissions, halt depletion of the ozone layer and conserve biodiversity. There are as yet no reliable estimates of the finances needed to support the environmental management effort to deal with these or other major problems. Merely to meet the requirements of trade deficits and reserves, assuming unchanged policies and trends, the developing countries' annual external finance needs will be about US$77 billion (at constant 1987 U.S. dollars) in the 1990's. Their external debt exceeded US$1.3 trillion, debt-service payments exceeded US$170 billion, and their net negative financial transfers to the developed countries were US$51 billion in 1991.

94. Investments on a massive scale are needed to reverse potentially catastrophic environmental degradation in the developing countries. As a practical example, Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer have already raised US$200 million for the Interim Multilateral Fund to enable the developing countries make the transition to ozone-friendly technologies and substances. Further innovative means, such as international taxes and charges based on global application of the "polluter pays" principle, specially assessed contributions, extended application of debt restructuring and swaps to

promote environmental management and sustainable development and other equitable means need to be mobilized, in addition to voluntary funds, to raise the billions of dollars the developing countries need to implement their global, regional and national responsibilities to conserve the earth's resources and protect its environment. UNCED offers an unparalleled opportunity to translate the growing political will on this score into practical programmes.

95. Developing countries today have to pay high market prices, patent fees and royalties to apply pollution-control and environmental improvement technologies. Yet in the course of their industrialization they have merely adopted the technologies made available to them by the developed countries. The latter have the finance and the technology for pollution abatement and prevention, but the developing countries do not have this. In contrast, the developing countries receive no compensation for their conservation of biological diversity and for the invaluable genetic material they make available for use in world production and commerce. This asymmetry in access to technology and materials is a major hurdle in the progress towards sustainable development. The issue of intellectual property rights and fair compensation for technologies has to be addressed in conjunction with that of providing countries in need with affordable access to technologies. The Montreal Protocol states that each Party shall take every practicable step, consistent with the programmes supported by the financial mechanism, to ensure that the best available, environmentally safe substitutes and related technologies are expeditiously transferred to Parties and that the transfers occur under fair and most favourable conditions. This provides a promising model for technology and financial flows to the needy countries to enable them to fulfil global and international environmental objectives.

96. The end of the cold war and of East-West ideological conflict and the bold moves by the United States and the USSR towards nuclear and other disarmament have opened up avenues of international consensus-building and conflict resolution. A peaceful world will release resources from the arms race and military conflict for environmental rehabilitation and development. If industrial countries would reduce their military spending by only 3 per cent a year, that would save US$25 billion annually, and if developing countries merely freeze their military expenditure, that would save US$10 billion annually. Although the GDP of developing countries is only 15 per cent of that of the industrial countries, they buy 75 per cent of all the arms traded each year. A reordering of priorities will greatly help in tackling the twin challenges of poverty alleviation and environmental improvement.

97. Democratization and people's participation in decision-making are spreading everywhere. Effective means of dealing with the environmental challenge, while meeting the immediate needs of people at the local level, can best be determined through a participatory process which allows conflicts of interests to be resolved. Linking social and human development to environmental protection and improvement calls for innovative design of public policy and its implementation through the 1990's. Avenues exist to establish mutual support between broad-based distribution of the benefits of development and environmental conservation and improvement. These avenues have to be fully explored.

98. When countries have pursued environmental and socio-economic objectives consistently, through close policy and programme coordination, and have provided for the means of implementing these objectives, they have achieved good results. There is an encouraging trend towards adjusting pricing and fiscal policies to pursue economic and environmental goals in harmony. Developing countries and the countries in transition to market economies can adapt and apply this experience. But the market mechanism by itself cannot achieve a society's environmental goals, including intergenerational equity in resource use. The role of the State remains vital, especially to protect the interests of groups which cannot register their stakes in the environment through the market mechanism.

99. The earth's resources and its ecosystems' services are limited and are under severe stress. Technologies can stretch the resources, but access to them is unevenly distributed among countries. Excessive population growth and its uncontrolled spatial distribution cause severe, even irreversible damage to the productive capacities of land and ecosystems. Past economic growth in the developed and developing countries was achieved at great environmental cost. The same patterns of economic and demographic growth cannot continue and cannot be replicated without jeopardizing human well-being. Lifestyles and consumption patterns have to change to make the benefit of the earth's capacities and resources equitably accessible. The economic growth of the developing countries should not be made to depend upon the developed countries' growth, since the nature of the growth in the former, if it is resource-intensive, will jeopardize development in the latter. Unless the issue of equitable composition and distribution of world economic growth within and among countries is squarely addressed, it will not be possible to find a globally satisfactory solution to the problem of environmental protection and sustainable development. National patterns of economic development must be made complementary through coordinated trade, economic and environmental policies in a manner that would permit an improvement in people's living standards, while protecting the earth's ecological balance and integrity. Countries' capacities to examine the social and economic implications of environmental action and the environmental implications of social and economic policies and programmes have to expand considerably.

100. Enlightened self-interest alone will not bring about environmental conservation or intergenerational, international and national equity in human well-being. The earth's fragile ecological capacity and the ethical imperative of human solidarity should provide the unifying bonds to harmonize development policies and priorities. Attitudes towards fellow beings and to nature have to change, following ethical principles and the conviction of global solidarity. There are some indications that lifestyles can change in line with global responsibility, but these have yet to become the mainstream. Similarly, priority for poverty alleviation and broad-based participation in development and access to environmental resources and services have to become the rule rather than the exception, if sustainable development is to become reality. Such changes in priorities and policies have to be supported by astuteness in governance and international cooperation, with a shared global vision of human well-being, present and future. The 1990's will test the capacities of countries and of the United Nations system to progress in solidarity towards sustainable development by bringing into existence and making operational the practical means to make that shared vision real.

VI. CONCLUSION

101. Following General Assembly resolutions 42/186, 42/187 and 44/227, Governments and the United Nations system have made progress in designing policies, programmes and plans, in establishing institutions, procedures, methods and regulatory frameworks, and in enhancing the involvement of the private sector, NGO's and local communities for environmentally sound and sustainable development. Further, over the last four years there has been a sustained momentum towards securing intergovernmental agreements on specific environmental management issues of global and regional significance. Furthermore, steady scientific and technological advance has been making available resource-saving and clean technologies and processes. But all this progress is very limited and uneven in relation to what is needed. And it will continue to remain so unless the structural aspects of the state of the world's environment and development receive the focused attention of world's political leaders. These aspects mainly include: (a) the need for adjustment in the composition and distribution of production and consumption within countries to relieve pressures on the environment; (b) the need for control of population growth and for direction of its spatial

distribution in relation to countries' capacities to meet their people's basic needs; (c) the need for adjustment in international economic relations, including trade, transnational investments and debt, to release constraints on the developing countries' capacities for environmental management and to meet the needs of their people; (d) the need to give priority to alleviation of poverty and to broad-based participation in development; (e) the need to improve the quality and means of governance to minimize waste and injustice and maximize the creative involvement of people in advancing human well-being.

102. At present, throughout the world, promising experiments are going on along the path to sustainable development, and the United Nations system is involved in supporting several of them. The United Nations Conference on Environment and Development will provide an opportunity to take stock of that experience and to determine the way ahead in global solidarity. Without prejudice to the outcome of the Conference, the General Assembly may wish to resolve to keep under review, on a regular basis, the progress of national action and international cooperation towards environmentally sound and sustainable development, and request the Secretary-General to bring to its attention any innovative or promising initiatives in that regard.